Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An integrated circuit for the authentication of a consumable storage device by an apparatus, the integrated circuit comprising a memory space which contains encrypted data defined by a message authentication code (MAC) applied to data relating to a consumable stored by the device, the MAC being a construction of an asymmetric cryptographic function whereby a public key K_T stored by another integrated circuit of the apparatus is used to encrypt a random number generated by said another integrated circuit, a secret key K_A stored by the integrated circuit is used to decrypt ~~an~~ the encrypted random number, the decrypted random number is appended to ~~the data as generated by another integrated circuit of the apparatus and a secret key K_A of the apparatus is used to decrypt encrypted~~ data stored in the memory space, the secret key K_A is used to encrypt the appended random number and data, and the public key K_T is used to decrypt the encrypted random number appended to the data.

2. (Original) An integrated circuit as claimed in claim 1, in which the cryptographic function is a hash function such that the MAC is an algorithm known as HMAC.

3. (Original) An integrated circuit as claimed in claim 2 in which the hash function is one of an MD5 function and a SHA-1 function.

4. (Original) An integrated circuit as claimed in claim 2, in which the hash function is an SHA-1 function.

5. (Original) An integrated circuit as claimed in claim 4, which is configured to define a number of temporary registers and rotating counters and to calculate an output word on an iterative basis by calculating and allocating words to respective registers during processing of the SHA-1 function.

6. (Cancelled)

7. (Currently Amended) A method of encrypting data relating to a consumable of a consumable storage device for an apparatus and stored by an integrated circuit, the method including the steps of:

applying a message authentication code (MAC) to the data using two keys shared by the apparatus to decrypt the data, the MAC being a construction of an asymmetric cryptographic function whereby one of the keys is a public key stored by another integrated circuit of the apparatus and the other of the keys is a secret key stored by the integrated circuit, the public key being used to encrypt a random number generated by said another integrated circuit, the secret key is used to decrypt ~~an~~ the encrypted random number, the decrypted random number is appended to ~~the data as generated by another integrated circuit of the apparatus and the other key is a secret key used to decrypt encrypted~~ data stored in the ~~first mentioned~~ integrated circuit, the secret key is used to encrypt the appended random number and data, and the public key is used to decrypt the encrypted random number appended to the data.